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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,724	11/02/2001	Arun Chandra Kundu	10416-9	9154

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BROWN RAYSMAN MILLSTEIN FELDER & STEINER, LLP
SUITE 711
1880 CENTURY PARK EAST
LOS ANGELES, CA 90067

EXAMINER

JONES, STEPHEN E

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 07/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/005,724

Applicant(s)

KUNDU, ARUN CHANDRA

Examiner

Stephen E. Jones

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-13, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-16 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 2.5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in Paper No. 4 is acknowledged. The traversal is on the ground(s) that applicant believes that claims 1 and 5 are generic and that the examiner had indicated that no claims were generic. This is not found persuasive because the election requirement does indeed indicate that it appears that the independent claims 1, 5, 12, and 15 are generic. Applicant indicated that claims 1-11 read on the elected species. However, since the examiner believes that all of the independent claims are generic, all but claims 10 and 14 will be examined to expedite prosecution. Claims 10 and 14 more appropriately read on a non-elected species such as Fig. 13.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 10 and 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 4.

Claim Objections

3. Claim 15 is objected to because of the following informalities:

On line 4, it appears that the phrase "to first cross-section" should read as --to the first cross-section, -- to improve the grammatical form.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 5-9 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kundu et al. (TEM-Mode Planar Dielectric Waveguide resonator BPF for W-CDMA) cited by applicant.

Kundu (Fig. 4 and also see page 193, section (a)) teaches a band pass filter including: two quarter wavelength resonators and an evanescent waveguide between the resonators; the structure has ground electrodes on the top surface and small ground plates on the sides near the corners; also Fig. 4 shows that input/output electrodes on the ends have ground clearances at the bottom thus implying that the bottom surface includes grounding; the limitation of "blocks" in the claim is only given weight in terms of the final product form which is of a unitary device formed of block sections which is the same as the Kundu final product form (Claim 5); Fig. 4 shows the resonator sections to have the same size (Claim 6); the structure is rectangular throughout with all sides parallel or perpendicular to one another and thus satisfies the claim 7 limitations; the bottom surfaces are coplanar and the top surfaces are coplanar (Claims 8 and 9); the structure can be considered substantially rectangular prismatic since the sections are rectangular throughout in three dimensions; the sides of the resonators where they contact the evanescent waveguide can be considered cross-sections in the same

manner as claim 15; and the ends having the input/output electrodes are parallel to the cross-sections (Claim 16).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kundu et al. (TEM-Mode Planar Dielectric Waveguide resonator BPF for W-CDMA) cited by applicant in view of Konishi (Novel Dielectric Waveguide Components- Microwave Applications of New Ceramic Materials) cited by applicant.

Kundu teaches a bandpass filter as described above (including subject matter of Claims 3 and 13). Also the final product structure is of a single unit (Claim 2, i.e. product by process step not given patentable weight). However, Kundu does not teach that the $\frac{1}{4}$ wavelength resonators are $\frac{1}{2}$ wavelength resonators having both ends open (Claims 1-2, 11-12), or that the filter passing band is not less than 5 GHz (Claim 4).

Konishi teaches that dielectric waveguide resonators can be made as $\frac{1}{4}$ wavelength by having an open circuit end and a short circuit end or can be made as $\frac{1}{2}$ wavelength by shorting or open-circuiting both ends (see page 729, right hand column, section B).

It would have been considered obvious to one of ordinary skill in the art to have substituted $\frac{1}{2}$ wavelength resonators having both ends open circuited such as suggested by Konishi in place of the quarter wavelength resonators in the Kundu filter, because it would have been a mere substitution of art-recognized alternative resonator means for a dielectric bandpass filter.

Also, one of ordinary skill in the art would have found it routine to modify the filter to have the passing band to not be less than 5 GHz, because it would have been a mere selection of the of the operating characteristics based on the desired/intended use (i.e. the desired frequency/radio spectrum) of the device requiring one of ordinary skill in the art to perform only routine modifications.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 5-9 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-9 of copending Application No. 10/000,602.

The co-pending application claims 7-9 include all of the features of the present claims 5-9 except that the co-pending application claims are more narrow (i.e. they include additional limitations) thus anticipating the present claims 5-9. Also, note that the co-pending application's claims have the corresponding sides of the structure labeled differently from the present claims, but result in the same structure.

10. This is a provisional obviousness-type double patenting rejection.

11. Claims 12-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 14 and 16 of copending Application No. 10/236,416 in view of Konishi (Novel Dielectric Waveguide Components-Microwave Applications of New Ceramic Materials) cited by applicant.

Claims 14 and 16 of the co-pending application teaches the same structure as the present application claims 12-13 except that the co-pending application teaches $\frac{1}{4}$ wavelength resonators, but not $\frac{1}{2}$ wavelength resonators.

Konishi teaches that dielectric waveguide resonators can be made as $\frac{1}{4}$ wavelength by having an open circuit end and a short circuit end or can be made as $\frac{1}{2}$ wavelength.


It would have been considered obvious to one of ordinary skill in the art to have substituted $\frac{1}{2}$ wavelength resonators having both ends open circuited such as suggested by Konishi in place of the quarter wavelength resonators in the co-pending claims 14-16 filter, because it would have been a mere substitution of art-recognized alternative resonator means for a dielectric bandpass filter.

This is a provisional obviousness-type double patenting rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 703-305-0390. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 703-308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Stephen Jones
Patent Examiner
Art Unit 2817

SEJ
July 10, 2003